

REMARKS/ARGUMENTS

During the phone interview, the Examiner said he would allow independent claims comprising a combination of claims 1, 2, and 12 and another combination of claims 1, 6, and 12. Applicants amended claim 1 to include the requirements of claims 6 and 12 and amended claim 2 to be in independent form and to include the requirements of claims 1 and 12. Applicants made similar amendments to the system and article of manufacture claims. Specifically, applicants amended independent system claim 14 to include the requirements of claims 19 and 25 and amended claim 15 to be in independent form and include the requirements of claims 14 and 25. Similarly, Applicants amended independent article of manufacture claim 27 to include the requirements of claims 32 and 38, and amended claim 28 to be in independent form and include the requirements of claims 27 and 38.

Applicants amended claims 12, 25, and 38 to depend from claims 2, 15, and 33, respectively.

Applicants amended claims 3, 4, 5, 10, 11, 16, 17, 18, 23, 24, 29, 30, 31, 36, and 37 to change “resource” to “shared storage device” to make these dependent claims consistent with the amendments to the independent claims.

Applicants amended claims 7 and 20 to correct the antecedent basis for the “oldest pending transaction.”

Applicants amended claims 13, 26, and 39 to depend from claims 1, 14, and 32.

1. Claims 1-11, 14-24, and 27-37 are Patentable Over the Cited Art

The Examiner rejected claims 1-11, 14-24, and 27-37 as anticipated (35 U.S.C. §102) by Davies (U.S. Patent No. 6,839,767). Applicants traverse.

Amended claims 1, 14 and 27 concern managing client transactions requesting access to a shared storage device, and require: logging client transactions providing updates to data in the shared storage device in a log file from multiple clients, wherein an oldest pending transaction logged in the log file is capable of preventing new transactions from being added to the log file; determining one of the clients transmitting data at a transmission rate less than a threshold transmission rate; and denying subsequent transactions from the determined client access to the

shared storage device to provide additional space in the log file for new transactions from the clients, other than the determined client, requesting access to the shared storage device.

The Examiner cited col. 7, lines 20-30, col. 10, lines 55-67, and col. 11 ,lines 1-15 and 33-45 of Davies as disclosing the claim requirement of determining one of the clients transmitting data at a transmission rate less than a threshold transmission rate. (Final Office Action, pg. 3) Applicants traverse.

The cited col. 7 mentions that a network management system determines packets “in flight” and has access to statistical info about traffic it receives. From this information, the network management system estimates the current load on network resources. If this network load, exceeds a threshold, then new transactions are denied admission until the network load drops. Nowhere does the cited col. 7 disclose the claim requirement that an oldest pending transaction logged in the log file is capable of preventing new transactions of updates to storage from being added to the log file in combination with the other claim requirements, such as determining one of multiple clients transmitting data at a transmission rate less than a threshold. Instead, the cited col. 7 discusses estimating a load on network resources, and denying new transactions if this load exceeds a threshold.

The cited col. 10 discusses setting a local threshold and determining whether a new session is acceptable with respect to the threshold. If not acceptable, a message indicating denial of the request is sent to the sender. Nowhere does the cited col. 10 disclose the claim requirement that an oldest pending transaction of an update to storage logged in the log file is capable of preventing new transactions from being added to the log file in combination with the other claim requirements, such as determining one client transmitting data at a transmission rate less than a threshold.

The cited col. 11 mentions that setting the local threshold starts with determining whether a congestion notification has been received. If so, the local threshold is reduced by measuring the current bandwidth usage (CBU) of the aggregate data flow and reducing the threshold to a percentage of the CBU. The threshold is not reduced below a guaranteed minimum bandwidth for the path. The cited col. 11 , lines 33-45 discuss increasing the local threshold by comparing to a maximum configured bandwidth. If the local threshold is greater or equal to the maximum

configured bandwidth, then the local threshold is maintained. If the local threshold is less and the duration since the last increase is less than an interval (T2), the local threshold is maintained.

The cited col. 11 nowhere discloses the claim requirement that an oldest pending transaction of updates to storage logged in the log file is capable of preventing new transactions from being added to the log file in combination with the other claim requirements, such as determining one client transmitting data at a transmission rate less than a threshold. Instead, the cited col. 11 discusses setting a local threshold to a percentage of the current bandwidth usage of the aggregate data flow.

As discussed, Applicants added the requirements of claims 6, 19, and 32 to claims 1, 14, and 27 that an oldest pending transaction logged in the log file is capable of preventing new transactions from being added to the log file. The Examiner cited col. 9, lines 45-51 of Davies as disclosing the additional requirements of these claims. (Final Office Action, pg. 4) Applicants traverse.

The cited col. 9 mentions that the granting and denying of sessions is recorded in the table, and the termination of sessions after long periods of inactivity are also recorded in the table. Further, the termination would be recorded for granted and denied sessions by deleting the entry for the session.

Although the cited col. 9 discusses recording a termination of a session by deleting the entry for the session, nowhere does the cited col. 9 disclose a log of transactions comprising updates to data in a storage device nor that an oldest pending transaction of such an update in the log file can prevent new transactions from being logged. Moreover, there is no disclosure in the cited Davies that an old session would prevent other sessions from being added to the table. Instead, the cited col. 9 concerns deleting an entry for a terminated session. Applicants submit that the cited col. 9 does not disclose transactions of updates to the storage device. Instead, the cited col. 9 discusses entries for a terminated session. The cited session is different from and does not disclose the claim requirements of a log of updates to a shared storage device.

Accordingly, claim 1, 14, and 27 are patentable over the cited art because the cited Davies does not disclose all the claim requirements.

Amended independent claims 2, 15, and 28 concern managing client transactions requesting access to a shared storage device, and require: logging client transactions providing updates to data in the shared storage device in a log file from multiple clients; determining one of the clients transmitting data at a transmission rate less than a threshold transmission rate; denying subsequent transactions from the determined client access to the shared storage device to provide additional space in the log file for new transactions from the clients, other than the determined client, requesting access to the shared storage device; and removing all pending transactions of the determined client from the log file.

Applicants submit that the requirements of claims 1, 14, and 27 added to claims 2, 15, and 28 distinguish over the cited art for the reasons discussed above. Claim 2, 15, and 28 additionally require removing all pending transactions of the determined client from the log file. The Examiner cited the above discussed col. 9, lines 45-51 of Davies as disclosing these additional requirements of claim 2. (Final Office Action, pg. 3) Applicants traverse.

The cited col. 9 mentions that the granting and denying of sessions is recorded in the table, and the termination of sessions after long periods of inactivity are also recorded in the table. The termination is recorded for granted and denied sessions by deleting the entry from the session table. The cited col. 9 concerns managing entries in a session table. Applicants submit that the cited col. 9 does not disclose removing pending transactions of updates to storage of a client transmitting at a low transmission rate. Instead, the cited col. 9 discusses recording granted and terminated sessions. The cited session is different from and does not disclose the claim requirements of a log of updates to a shared storage device. Further, nowhere does the cited col. 9 disclose removing from a log all transactions of updates to a shared storage device. Instead, the cited col. 9 discusses managing entries in a session table, not a log of transactions of updates.

Accordingly, claim 2, 15, and 28 are patentable over the cited art because the cited Davies does not disclose all the claim requirements.

Claims 3-11, 16-24, and 29-37 are patentable over the cited art because they depend from one of claims 1, 14, and 27, which are patentable over the cited art for the reasons discussed

above. Moreover, the below discussed dependent claims provide additional grounds of patentability over the cited art.

Claims 3, 16, and 29 depend from claims 1, 14, and 27 and require that the clients submit transactions requesting the resource during a session that the clients initiate, and determining one client session active longer than a threshold time period, wherein the determination of whether the client data transmission rate is less than the threshold transmission rate is made for the determined client whose session is active longer than the threshold time period, and wherein subsequent transactions are denied access to the shared resource for the client having the session active longer than the threshold period of time and having the data transmission rate less than the threshold transmission rate.

The Examiner cited the above discussed cols. 9 and 10-11 of Davies as disclosing the additional requirements of these claims. (Final Office Action, pg. 3) Applicants traverse.

The cited col. 9 mentions that the granting and denying of sessions is recorded in the table, and the termination of sessions after long periods of inactivity are also recorded in the table. The cited cols. 10 discusses determining whether a new session is acceptable with respect to the threshold. If not acceptable, a message indicating denial of the request is sent to the sender. The cited col. 11 mentions that setting the local threshold starts with determining whether a congestion notification has been received. If so, the local threshold is reduced by measuring the current bandwidth usage (CBU) of the aggregate data flow and reducing the threshold to a percentage of the CBU. The threshold is not reduced below a guaranteed minimum bandwidth for the path. The cited col. 11 , lines 33-45 discusses increasing the local threshold by comparing to a maximum configured bandwidth. If the local threshold is greater or equal to the maximum configured bandwidth, than the local threshold is maintained. If the local threshold is less and the duration since the last increase is less than an interval (T2), the local threshold is maintained.

Although the cited Davies discusses determining whether a new session is acceptable based on a threshold of the current bandwidth usage, and recording granted and denied sessions in a table, nowhere does the cited Davies anywhere disclose that the determination of whether the client data transmission rate is less than the threshold transmission rate is made for the

determined client whose session is active longer than a threshold time period. There is no disclosure in the cited Davies of comparing a client data transmission rate to a threshold for clients that have had a session active longer than a period. The cited col. 9 discusses terminating sessions that have been inactive for a long period. The claims do not require terminating sessions active longer than a threshold time, but instead claim determining whether such clients have a data transmission rate less than a threshold transmission rate, and then denying updates of data to storage if they do.

Accordingly, claims 3, 16, and 29 provide additional grounds of patentability over the cited art because the cited Davies does not disclose all the claim requirements.

Claims 5, 18, and 31 depend from claims 4, 17, and 30 and further require determining one client that has transmitted a threshold amount of data, wherein the determination and removal from the log file of pending transactions whose access to the resource has completed is made for all the pending transactions of the determined client that has transmitted the threshold amount of data. The Examiner cited col. 7, lines 20-40 and col. 9, lines 45-51 of Davies as disclosing the requirements of these claims. (Final Office Action, pg. 4) Applicants traverse.

The cited col. 7 mentions that a network management system determines packets “in flight” and has access to statistical info about traffic it receives. From this information, the network management system estimates the current load on network resources. If this network load exceeds a threshold, then new transactions are denied admission until the network load drops. The cited col. 9 mentions that the granting and denying of sessions is recorded in the table, and the termination of sessions after long periods of inactivity are also recorded in the table.

Nowhere do the cited cols. 7 and 9 disclose determining one client that has transmitted a threshold amount of data and then removing pending transactions of updates to storage for the determined client whose access to the resource has completed. The cited col. 7 mentions denying new transactions if network load is too high and the cited col. 9 mentions deleting entries or a session from the table for terminated sessions. The claims on the other hand require removing transactions of updates to storage from the log file for a client that has transmitted a threshold amount of data. There is no disclosure in these cited sections of removing transactions

of updates to a storage device for a client that is determined to have transmitted a threshold amount of data.

Accordingly, claims 5, 18, and 31 provide additional grounds of patentability over the cited art because the cited Davies does not disclose all the claim requirements.

The Examiner rejected claims 7-9, 20-22, and 33-35 in view of prior art concerning the storing of transactions in a log file. Applicants submit that the Examiner is referencing art nowhere taught or suggested in the cited Davies. The Examiner has not provided any grounds to explain how Davies may be modified by art concerning storing transactions for storage in a log file using pointers. The cited Davies does not disclose nor concern how to log and process transactions directed to storage, but instead concerns how to manage sessions with clients.

If the Examiner maintains this rejection of claims 7-9, 20-22, and 33-35 in view of log file art separate and not found in Davies, Applicants submit that the Examiner must provide some suggestion or teaching in the art of modifying Davies to use the log file art for transactions to storage. Moreover, even if the Examiner could provide art that teaches or suggests modifying Davies with transaction logging art, the Examiner must change the grounds of rejection of claims 7-9, 20-22, and 33-35 from anticipation to obviousness.

2. Claims 12, 13, 25, 26, 38, and 39 are Patentable Over the Cited Art

The Examiner rejected claims 12, 13, 25, 26, 38, and 39 as obvious (35 U.S.C. §103) over Davies in view of Forecast (U.S. Patent No. 6,230,200). Applicants traverse.

Claims 13, 26, and 39 are patentable over the cited art because they depend, directly or indirectly, from claims 1, 14, and 27 which are patentable over the cited art for the reasons discussed above.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-11, 13-24, 26-37, and 39 are patentable over the art of record. Applicants submit herewith the fees for a one-month extension of time and for the claim amendments. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0466.

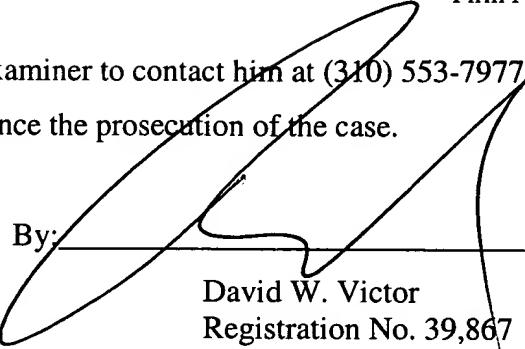
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The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

Dated: May 27, 2005

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